

In the Claims

Please amend Claims 1, 29, and 38, all as shown below. Applicant respectfully reserves the right to prosecute any originally presented claims in a continuing or future application.

1. (Currently Amended) A method of searching a plurality of service provider content repositories, comprising:

providing for the representation of the plurality of service provider content repositories as a virtual content repository (VCR) that includes a content model, the content model including

a set of content nodes and a set of hierarchy of nodes such that a content node is created for each of the plurality of service provider content repositories,

each content node identifies a service provider content repository, and each content node is associated with its own content schema,

a hierarchy node is created for different types of content available in the plurality of service provider content repositories, each hierarchy node is associated with one or more of the set of content nodes, and each hierarchy node is associated with its own hierarchy schema;

providing a plurality of application program interfaces (APIs), wherein each of the plurality of APIs corresponds to at least one application from a plurality of applications, that interface between the plurality of applications and the VCR wherein the APIs present a unified view of the plurality of service provider content repositories;

wherein each one of the plurality of service provider content repositories implements a service provider interface (SPI) that includes a set of interfaces and services that each service provider repository implements and wherein each SPI enables each of the corresponding service provider content repositories to access the VCR, such that each SPI interfaces between the VCR and the corresponding service provider content repository;

displaying content nodes and hierarchy nodes of the VCR in each application to enable searching of the VCR and the service provider content repositories associated therewith;

searching the VCR for information that satisfies a search expression, including searching the VCR and the service provider content repositories associated therewith wherein the search expression is mapped by the APIs to each SPI to search across multiple content repositories and wherein content caches are used to buffer search results from recently accessed content nodes or hierarchy nodes; and

providing search results.

2. (Canceled).
3. (Previously Presented) The method of claim 1 wherein searching the VCR includes:
searching each of the plurality of service provider content repositories.
4. (Original) The method of claim 1 wherein:
the search expression can include at least one of: a logical expression, a Boolean operator, a nested expression, an object name, a function/method call, a mathematical function, a mathematical operator, a string operator, an image operator, and Structured Query Language (SQL).
5. (Previously Presented) The method of claim 1 wherein providing search results includes:
combining the results of searching each one of the plurality of service provider content repositories.
6. (Original) The method of claim 1 wherein providing search results includes:
caching the search results.
7. (Previously Presented) The method of claim 1 wherein providing for the representation of the plurality of service provider content repositories as a VCR includes:
extending the content model to store information about the content model in the plurality of service provider content repositories.
8. (Previously Presented) The method of claim 7 wherein:
the content model provides a uniform representation of content for the plurality of service provider content repositories.
9. (Canceled).
10. (Previously Presented) The method of claim 1 wherein searching the VCR for information includes:

searching one or more of the content nodes, the content node schemas, the hierarchy nodes, and the hierarchy node schemas.

11-28. (Canceled).

29. (Currently Amended) A computer readable medium for searching a plurality of service provider content repositories, the computer readable medium having instructions stored thereon that when executed by one or more processors on the computer cause the computer to perform the steps of:

providing for the representation of the plurality of service provider content repositories as a virtual content repository (VCR) that includes a content model, wherein providing comprises the substeps of:

implementing by each one of the plurality of service provider content repositories a service provider interface (SPI) that includes a set of interfaces and services and wherein each SPI enables each of the corresponding service provider content repositories to access the VCR;

interfacing by the SPI between the VCR and the corresponding service provider content repository;

creating a content node for each of the plurality of service provider content repositories, such that each node identifies a service provider content repository;

associating each content node with its own schema;

creating a hierarchy node for different types of content available in the plurality of service provider content repositories;

associating each hierarchy node with one or more content nodes and

associating each hierarchy node with its own schema;

providing a plurality of application program interfaces (APIs), wherein each of the plurality of APIs corresponds to at least one application from a plurality of applications, that interface between the plurality of applications and the VCR wherein the APIs present a unified view of the plurality of service provider content repositories;

displaying content nodes and hierarchy nodes of the VCR in each application to enable searching of the VCR and the service provider content repositories associated therewith;

searching by the VCR for information that satisfies a search expression, including searching the VCR and the service provider content repositories associated therewith wherein the search expression is mapped by the APIs to each SPI to search across multiple content repositories and wherein content caches are used to buffer search results from recently accessed nodes; and providing search results.

30. (Previously Presented) The computer readable medium of claim 29, wherein searching the VCR includes:
searching each of the plurality of service provider content repositories.

31. (Previously Presented) The computer readable medium of claim 29 wherein:
the search expression can include at least one of: a logical expression, a Boolean operator, a nested expression, an object name, a function/method call, a mathematical function, a mathematical operator, a string operator, an image operator, and Structured Query Language (SQL).

32. (Previously Presented) The computer readable medium of claim 29, wherein providing search results includes:
combining the results of searching each one of the plurality of service provider service provider content repositories.

33. (Previously Presented) The computer readable medium of claim 29, wherein providing search results includes:
caching the search results.

34. (Previously Presented) The computer readable medium of claim 29, wherein providing for the representation of the plurality of service provider content repositories as a VCR includes:
extending the content model to store information about the content model in the plurality of service provider content repositories.

35. (Previously Presented) The computer readable medium of claim 34 wherein:

the content model provides a uniform representation of content for the plurality of service provider content repositories.

36. (Canceled).

37. (Previously Presented) The computer readable medium of claim 29, wherein searching the VCR for information includes:

searching one or more of the content nodes, the content node schemas, the hierarchy nodes, and the hierarchy node schemas.

38. (Currently Amended) A method of searching a plurality of service provider content repositories, comprising:

providing for the representation of the plurality of service provider content repositories as a virtual content repository (VCR) that includes a content model, wherein providing comprises the substeps of:

implementing by each one of the plurality of service provider content repositories a service provider interface (SPI) that includes a set of interfaces and services and wherein each SPI enables each of the corresponding service provider content repositories to access the VCR;

interfacing by the SPI between the VCR and the corresponding service provider content repository;

creating a content node for each of the plurality of service provider content repositories, such that each node identifies a service provider content repository;

associating each content node with its own schema;

creating a hierarchy node for different types of content available in the plurality of service provider content repositories;

associating each hierarchy node with one or more content nodes and

associating each hierarchy node with its own schema;

providing a plurality of application program interfaces (APIs), wherein each of the plurality of APIs corresponds to at least one application from a plurality of applications, that interface between the plurality of applications and the VCR wherein the APIs present a unified view of the plurality of service provider content repositories;

displaying content nodes and hierarchy nodes of the VCR in an application to enable searching of the VCR and the service provider content repositories associated therewith;

searching by the VCR for information that satisfies a search expression, including searching the VCR and the service provider content repositories associated therewith wherein the search expression is mapped by the APIs to each SPI to search across multiple content repositories and wherein content caches are used to buffer search results from recently accessed nodes; and
providing search results.

39. (Previously Presented) The method of claim 38 wherein searching the VCR includes: searching each of the plurality of service provider content repositories.
40. (Previously Presented) The method of claim 38 wherein:
the search expression can include at least one of: a logical expression, a Boolean operator, a nested expression, an object name, a function/method call, a mathematical function, a mathematical operator, a string operator, an image operator, and Structured Query Language (SQL).
41. (Previously Presented) The method of claim 38 wherein providing search results includes:
combining the results of searching each one of the plurality of service provider content repositories.
42. (Previously Presented) The method of claim 38 wherein providing search results includes:
caching the search results.
43. (Previously Presented) The method of claim 38 wherein providing for the representation of the plurality of content repositories as a VCR includes:
extending a VCR content model to include information in the plurality of service provider content repositories.

44. (Previously Presented) The method of claim 43 wherein:
the content model provides a uniform representation of content for the plurality of service provider content repositories.
45. (Previously Presented) The method of claim 18 wherein searching the VCR for information includes:
searching one or more of the content nodes, the content node schemas, the hierarchy nodes, and the hierarchy node schemas.